

those illustrating the development of the malaria parasite and that this polyembryony suggested the alternation of sexual and asexual generations found in Protozoa and the trematodes. As the rate of increase by the asexual mode is much more rapid than that by the sexual mode it is fortunate for humanity that in the case of the malaria parasite the period during which reproduction can continue by the asexual mode alone is limited. Certain phenomena resembling polyembryony, occurring in other forms of animal life, were pointed out by various members present, and Doctor Phillips spoke of the artificial production of half and quarter embryos by chemical and mechanical means and also referred to the work of Doctor Conkling on ascidians, which seems to contradict the Mosaic theory of development.

—Mr. Banks presented the following paper :

### THE PSYCHODIDÆ OF THE VICINITY OF WASHINGTON.

By NATHAN BANKS.

For several years I have taken some interest in collecting the Psychodidæ wherever I have resided, and have now a dozen species from the vicinity of Washington, four of which are new. These tiny, delicate flies are not easily preserved for the cabinet; it is necessary that they be mounted soon after capture, and that no other insects be in the vial with them; so that unless one goes especially prepared to catch them, his captures will not be worth much.

I have not had the facilities to attend to the rearing of any of the species, but offer notes on the habits and habitats of some of the forms. I am inclined to think that most of our species do not live in water, but only in moist places.

#### *Psychoda alternata* Say.

Our most common species, taken in June, July, August, and November. It is often found resting on out-buildings, and doubtless breeds in muddy spots adjoining them.

#### *Psychoda cinerea* Banks.

Occurs on manure in the fields and woods, often far from

water, and evidently breeds in the manure. Falls Church, Va.; High Island, Maryland; April to November.

***Psychoda minuta* Banks.**

Taken at Falls Church, Va., in April, May, and October. It is sometimes seen flying around the lamp on warm summer nights.

***Psychoda nigra* Banks.**

Not uncommon near streams, resting on rocks, under bridges, and under leaves of plants overhanging the water. Falls Church and Glencarlyn, Va., in May, July, and August.

***Psychoda superba* Banks.**

On the trunks of large trees in moist and shady places near streams; Washington, D. C., and Falls Church, Va., June and July.

***Psychoda nitida* Banks.**

The only specimens seen were taken on the trunks of large trees on Fourteenth Street, Washington, D. C., in August.

***Psychoda signata* Banks.**

Also taken on trunks of trees, Washington, D. C., in July.

***Psychoda opposita* Banks.**

Taken in June and July in Washington, D. C., on trunks of trees.

***Psychoda quadripunctata*, n. sp.**

Head black, some whitish-gray hair above; antennæ dark brown, tapering; thorax black, densely clothed with whitish-gray hair above, and jet-black hair behind near the abdomen; the latter black, with mostly black hair, a streak of whitish hair each side toward tip; legs blackish, the tarsal articles white at the tips. Wings with grayish-white hair on basal part along the second vein, and near the anal margin; on the basal part are four tufts of erect jet-black hair, one near costal margin near base, one on anal margin at end of whitish hairs, and two on the discal part of wing just before the middle; costal fringe long, jet-black, interrupted just beyond the middle and just before the tip by patches of snow-white hair, two similar patches in

posterior fringe, one near tip and one at middle, rest of fringe dark brown and extremely long; on the margin the veins end in minute black spots.

Expanse, 2.8 mm.

One specimen from Falls Church, Va., 15 May. A very handsome species.

### ***Psychoda interrupta*, n. sp.**

Head and thorax densely clothed with whitish hair above, some gray on the middle of the thorax; antennæ with gray hairs, tapering; abdomen black, some white hair each side at tip; legs pale, marked toward the tips with blackish, the hind tibia blackish at tip, the basal and apical tarsal joints mostly black. Wings gray on basal part, with few hairs, more densely haired on apical part and more or less dark brownish, in some specimens a faint appearance of three dark bands, one apical, one at middle, and one near base; costal fringe gray, white near tip; apical fringe snow-white, at outer anal angle a broad patch of black fringe, basad of it is white, and then brownish. In the apical part of the costa in well-marked specimens, are three small white spots, slightly indenting the wings from the costal margin.

Expanse, 2.4 mm.

Several specimens from Plummers Island, Maryland, 24 July, 28 August, attracted to the light.

### ***Psychoda basalis*, n. sp.**

Head and thorax with brownish hair, a prominent tuft of white hair on face; antennæ black; thorax rather yellowish brown; abdomen black, with black hair; legs black, with some scattered white hairs, rather longer than usual. Basal half of wing jet black, made so by dense hairs from the veins, a tuft of gray at extreme base; beyond the middle of wing the hair is grayish and sparse; basal, costal, and posterior fringes black, apical fringes less dense and grayish, although the extreme tip is jet black. Allied to *P. bicolor* Bks., but distinct by dark gray hair on thorax (white in *P. bicolor*), and by darker legs, etc.

Expanse, 3.1 mm.

Several specimens from Falls Church, Va., May 7 to 15.

### ***Psychoda apicalis*, n. sp.**

Head and thorax with grayish-white hair above, brownish behind on the thorax; antennæ and legs jet-black; abdomen densely gray-haired. Wings rather broad, black, some grayish-white hair on basal

part; near the middle are two darker discal patches, rather indistinct; costal fringe jet-black, anal fringe rather more brownish, latter quite long, at apex of wing is a broad patch of snow-white fringe. Hind tibiae with a fringe of long black hairs behind. Markings similar to *P. marginalis* Banks, but it is a blacker insect, with black tarsi (honey-yellow in *P. marginalis*).

Expanse, 3.5 mm.

One specimen from Falls Church, Va., 17 July.

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Mr. Knab spoke of the finding, by Mr. J. B. Van Duzee, of a psychodid larva in water between the leaves of a Bromelia in Florida. The adult, on examination, seemed to be a new species. Another psychodid larva he himself found to be very abundant in moisture at the margin of a sewer outlet in Mexico. Mr. Barber referred to his former note before the Society (see p. 102) on a blood-sucking psychodid, *Flebotomus* sp., found in Guatemala, and stated that a species of *Flebotomus*, had lately been discovered by him at Plummers Island, Maryland, and that this species had the same annoying habit.

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